REVISED VERSION

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 12 April 2001 (12.04.2001)

PCT

(10) International Publication Number WO 01/25326 A1

- (51) International Patent Classification7: C08K 5/00, C09K 3/16 // (C08K 5/00, 5:19, 5:42, 5:435)
- (21) International Application Number: PCT/US00/06597
- (22) International Filing Date: 14 March 2000 (14.03.2000)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 09/412,850 6 Oct

6 October 1999 (06.10.1999)

- (71) Applicant: 3M INNOVATIVE PROPERTIES COM-PANY [US/US]; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).
- (72) Inventors: LAMANNA, William, M.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). KLUN, Thomas, P.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). HACHEY, Kathleen, A.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). FANTA, Alan, D.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US).
- (74) Agents: WEISS, Lucy, C. et al.; Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

- (81) Designated States (national): AE, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the revised international search report: 30 August 2001
- (15) Information about Correction:
 see PCT Gazette No. 35/2001 of 30 August 2001, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

1/25326 A1

(54) Title: ANTISTATIC COMPOSITION

(57) Abstract: An antistatic composition comprises (a) at least one ionic salt consisting of a nonpolymeric nitrogen onium cation and a weakly coordinating fluoroorganic anion, the conjugate acid of the anion being a superacid; and (b) at leat one thermoplastic polymer. The composition exhibits good antistatic performance over a wide range of humidity levels.

REVISED VERSION

INTERNATIONAL SEARCH REPORT

International Application No PCT/IJS 00/06597

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C08K5/00 C09K3/16 //(C08K5/00,5:19,5:42,5:435) According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C08K C09K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) WPI Data, EPO-Internal, CHEM ABS Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category * WO 84 02798 A (MINNESOTA MINING & MFG) 19 July 1984 (1984-07-19) 1,2 A page 5, line 24 -page 6, line 36; claims 1,18-20 page 8, line 15 - line 26 EP 0 363 094 A (MINNESOTA MINING & MFG) 1,3,15 Α 11 April 1990 (1990-04-11) page 4, line 16 - line 17 15 X examples WO 90 05129 A (PPG INDUSTRIES INC) 1,2 17 May 1990 (1990-05-17) examples EP 0 873 986 A (ALTECH COMPANY LIMITED) Α 1.2 28 October 1998 (1998-10-28) claims Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents : T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the investment of the principle or theory. "A" document delining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. other means document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search **2** 5. 07. 2000 6 April 2001 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Engel, S

INTERNATIONAL SEARCH REPORT

formation on patent family members

Inter "onal Application No PC I/US 00/06597

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 8402798 A	19-07-1984	US 4570197 A AU 564317 B AU 2418584 A BR 8307674 A DE 3382707 D DE 3382707 T EP 0131587 A JP 4039755 B JP 60500468 T	11-02-1986 06-08-1987 02-08-1984 11-12-1984 09-09-1993 03-03-1994 23-01-1985 30-06-1992 04-04-1985
EP 0363094 A	11-04-1990	US 4873020 A DE 68908066 D DE 68908066 T JP 2139026 A	10-10-1989 09-09-1993 03-02-1994 29-05-1990
WO 9005129 A	17-05-1990	US 4904825 A CA 2001561 A EP 0442948 A JP 4502911 T US 5053531 A US 5187214 A	27-02-1990 08-05-1990 28-08-1991 28-05-1992 01-10-1991 16-02-1993
EP 0873986 A	28-10-1998	JP 10298539 A CA 2235502 A CN 1197100 A US 6028132 A	10-11-1998 22-10-1998 28-10-1998 22-02-2000

REVISED VERSION

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 12 April 2001 (12.04.2001)

PCT

(10) International Publication Number WO 01/25326 A1

- (51) International Patent Classification?: C08K 5/00, C09K 3/16 // (C08K 5/00, 5:19, 5:42, 5:435)
- (21) International Application Number: PCT/US00/06597
- (22) International Filing Date: 14 March 2000 (14.03.2000)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 09/412,850

6 October 1999 (06.10.1999) US

- (71) Applicant: 3M INNOVATIVE PROPERTIES COM-PANY [US/US]; 3M Center, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).
- (72) Inventors: LAMANNA, William, M.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). KLUN, Thomas, P.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). HACHEY, Kathleen, A.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US). FANTA, Alan, D.; Post Office Box 33427, Saint Paul, MN 55133-3427 (US).
- (74) Agents: WEISS, Lucy, C. et al.; Office of Intellectual Property Counsel, Post Office Box 33427, Saint Paul, MN 55133-3427 (US).

- (81) Designated States (national): AE, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- (88) Date of publication of the revised international search report: 30 August 2001
- (15) Information about Correction: see PCT Gazette No. 35/2001 of 30 August 2001, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

1/25326 A1

(54) Title: ANTISTATIC COMPOSITION

(57) Abstract: An antistatic composition comprises (a) at least one ionic salt consisting of a nonpolymeric nitrogen onium cation and a weakly coordinating fluoroorganic anion, the conjugate acid of the anion being a superacid; and (b) at leat one thermoplastic polymer. The composition exhibits good antistatic performance over a wide range of humidity levels.

REVISED VERSION

INTERNATIONAL SEARCH REPORT

PCT/US 00/06597

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C08K5/00 C09K3/16 //(C08K5/00,5:19,5:42,5:435) According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C08K C09K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) WPI Data, EPO-Internal, CHEM ABS Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category 5 Relevant to claim No. WO 84 02798 A (MINNESOTA MINING & MFG) 19 July 1984 (1984-07-19) 1,2 A page 5, line 24 -page 6, line 36; claims 1,18-20 page 8, line 15 - line 26 EP 0 363 094 A (MINNESOTA MINING & MFG) 11 April 1990 (1990-04-11) 1.3.15 А page 4, line 16 - line 17 examples 15 X WO 90 05129 A (PPG INDUSTRIES INC) 1,2 Α 17 May 1990 (1990-05-17) examples EP 0 873 986 A (ALTECH COMPANY LIMITED) Α 1,2 28 October 1998 (1998-10-28) Further documents are listed in the continuation of box C. IX I Patent family members are fisted in annex. Special categories of cited documents : T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the International "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search **2** 5. 07. 2000 6 April 2001 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 Engel, S

INTERNATIONAL SEARCH REPORT

formation on patent family members

Internal Application No PC I / US 00/06597

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 8402798 A	19-07-1984	US 4570197 A AU 564317 B AU 2418584 A BR 8307674 A DE 3382707 D DE 3382707 T EP 0131587 A JP 4039755 B JP 60500468 T	11-02-1986 06-08-1987 02-08-1984 11-12-1984 09-09-1993 03-03-1994 23-01-1985 30-06-1992 04-04-1985
EP 0363094 A	11-04-1990	US 4873020 A DE 68908066 D DE 68908066 T JP 2139026 A	10-10-1989 09-09-1993 03-02-1994 29-05-1990
WO 9005129 A	17-05-1990	US 4904825 A CA 2001561 A EP 0442948 A JP 4502911 T US 5053531 A US 5187214 A	27-02-1990 08-05-1990 28-08-1991 28-05-1992 01-10-1991 16-02-1993
EP 0873986 A	28-10-1998	JP 10298539 A CA 2235502 A CN 1197100 A US 6028132 A	10-11-1998 22-10-1998 28-10-1998 22-02-2000